Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An off-axis beam shaper ~~for producing an output beam of a~~
   ~~desired order with a desired energy distribution~~, comprising:
   an optical substrate; and
   a diffractive surface, wherein the diffractive surface is formed on the optical
substrate, wherein the diffractive surface shapes ~~to perform both a beam shaping function~~
~~on~~ an input beam so that an output beam of a desired diffractive order has a more uniform
energy distribution than the input beam and is ~~and to~~ spatially separated ~~the output beam of~~
~~the desired order~~ from all other diffracted beams of different orders, wherein the spatial
separation avoids interference between the output beam and ~~, thereby avoiding~~
~~interference between the output beam~~ and any other diffracted beam of a different order.

2. (original) The beam shaper of claim 1, wherein the beam shaping function includes
changing an energy distribution of the input beam from Gaussian to uniform.

3. (original) The beam shaper of claim 1, further comprising: a beam corrector located a
distance from the beam shaper to correct a phase of the output beam.

4. (original) The beam shaper of claim 3, wherein the beam corrector changes a direction of
the output beam.

5. (original) The beam shaper of claim 1, wherein the diffractive surface deflects the output
beam at an acute angle to an optical axis of the input beam.

6. (original) The beam shaper of claim 1, wherein the desired order is 1st order.

7. – 10. (cancelled)

11. (currently amended) A method of shaping an input beam with diffractive optics, comprising:

diffracting an input beam, wherein the input beam is diffracted into a plurality of diffracted beams of various orders;

shaping the input beam, wherein an output beam of a desired order has a desired shape and energy distribution more uniform than the input beam at a predetermined distance from the optic;

to have a desired shape and energy distribution at a predetermined distance from the optic; and

spatially separating an the output beam having a desired order from other diffracted beams of different orders at the predetermined distance, where the output beam does not interfere with the other diffracted beams.

12. (original) The method of claim 11, wherein the diffracting step includes changing an energy distribution of the input beam from Gaussian to uniform.

13. (currently amended) The beam-shaper method of claim 11, further comprising: correcting a phase of the output beam.

14. (currently amended) The beam-shaper method of claim 13, wherein the correcting step includes changing a direction of the output beam.

15. (currently amended) The beam-shaper method of claim 11, wherein the spatially separating step includes deflecting the output beam at an acute angle to an optical axis of the input beam.

16. – 18. (cancelled)